



PAS Rapid Loader™ Curved Shaft Grass Trimmer Attachment

Operator's Manual

MODEL

99944200615

FOR MODELS:

SRM-2100SB

SRM-2400SB

SRM-210SB/211SB

SRM-225SB

SRM-260SB/261SB

PAS-2100

PAS-2400

PAS-2601

PAS-210/211

PAS-225

PAS-230/231

PAS-260/261

PAS-265



WARNING

Read rules for safe operation and instructions carefully. ECHO provides an Operator's Manual and a Safety Manual, with your original Split Boom/Pro Attachment Series™ Trimmer. Those manuals and this manual must be read and understood for proper and safe operation.

INTRODUCTION

Welcome to the ECHO family. This ECHO product was designed and manufactured to provide long life and on-the-job dependability. Read and understand this manual and the SAFETY MANUAL you found in the same package. You will find both easy to use and full of helpful operating tips and SAFETY messages.

THE OPERATOR'S MANUAL

Read and understand this manual before operation. Keep it in a safe place for future reference. It contains specifications and information for operation and maintenance specific to the attachment.

THE SAFETY MANUAL

Explains possible hazards and what measures you should take to insure safe operation.

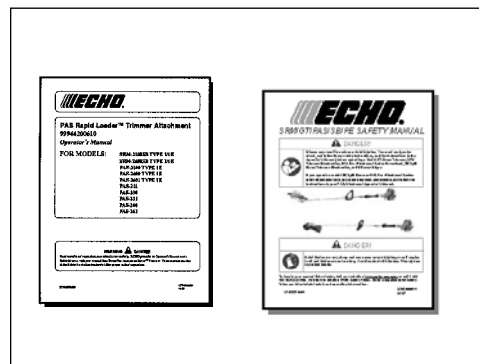


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Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories, and may not include all standard equipment.

SAFETY

MANUAL SAFETY SYMBOLS AND IMPORTANT INFORMATION

Throughout this manual and on the product itself, you will find safety alerts and helpful, information messages preceded by symbols or key words. The following is an explanation of those symbols and key words and what they mean to you.

DANGER

The safety alert symbol accompanied by the word “DANGER” calls attention to an act or condition which **WILL** lead to serious personal injury or death if not avoided.

WARNING

The safety alert symbol accompanied by the word “WARNING” calls attention to an act or condition which **CAN** lead to serious personal injury or death if not avoided.

CAUTION

The safety alert symbol accompanied by the word “CAUTION” calls attention to an act or condition which may lead to minor or moderate personal injury if not avoided.



CIRCLE AND SLASH SYMBOL

This symbol means the specific action shown is prohibited. Ignoring these prohibitions can result in serious or fatal injury.











NOTE






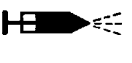





This enclosed message provides tips for use, care and maintenance of the unit.

IMPORTANT

The enclosed message provides information necessary for the protection of the unit.

INTERNATIONAL SYMBOLS

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Read and understand Operator's Manual.		Fuel and oil mixture
	Wear eyes, ears and head protection		Rotating Cutting Attachment
	Hot Surface		Wear hand protection. Use two handed.
	Safety/Alert		DO NOT smoke near fuel.
	Avoid all power lines. This unit is not insulated against electrical current.		Do not operate closer than 15 M (50 ft.) from electrical hazards.

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	DO NOT allow flames or sparks near fuel.		Wear slip resistant foot wear.
	Emergency stop		Ignition ON/OFF
	Choke Control "Cold Start" Position (Choke Closed)		Primer bulb
	Choke Control "Run" Position (Choke Open)		Carburetor adjustment - High speed mixture
	Carburetor adjustment - Low speed mixture		Carburetor adjustment - Idle speed
		Keep bystanders and helpers away 15 m (50 ft.).	

PERSONAL CONDITION AND SAFETY EQUIPMENT



WARNING

Trimmer users risk injury to themselves and others if the trimmer is used improperly or safety precautions are not followed. Proper clothing and safety gear must be worn when operating a trimmer.

Physical Condition

Your judgment and physical dexterity may not be good:

- if you are tired or sick,
- if you are taking medication,
- if you have taken alcohol or drugs.

Operate unit only if you are physically and mentally well.

Eye Protection

Wear eye protection that meets ANSI Z87.1 or CE requirements whenever you operate the trimmer.

Hand Protection

Wear no-slip, heavy duty work gloves to improve your grip on the Trimmer/Brush Cutter handles. Gloves also reduce the transmission of machine vibration to your hands.

Hearing Protection

ECHO recommends wearing hearing protection whenever unit is used.

Proper Clothing

Wear snug fitting, durable clothing;

- Pants should have long legs, shirts with long sleeves.
- DO NOT WEAR SHORTS,
- DO NOT WEAR TIES, SCARVES, JEWELRY, or clothing with loose or hanging items that could become entangled in moving parts or surrounding growth.

Wear sturdy work shoes with nonskid soles;

- DO NOT WEAR OPEN TOED SHOES,
- DO NOT OPERATE UNIT BAREFOOTED.

Wear no-slip, heavy duty work gloves.

Keep long hair away from engine and air intake. Retain hair with cap or net.

Hot Humid Weather

Heavy protective clothing can increase operator fatigue which may lead to heat stroke. Schedule heavy work for early morning or late afternoon hours when temperatures are cooler.

Vibration and Cold

It is believed that a condition called Raynaud's Phenomenon, which affects the fingers of certain individuals, may be brought about by exposure to vibration and cold. Exposure to vibration and cold may cause tingling and burning sensations, followed by loss of color and numbness in the fingers. The following precautions are strongly recommended, because the minimum exposure which might trigger the ailment is unknown.

- Keep your body warm, especially the head, neck, feet, ankles, hands, and wrists.
- Maintain good blood circulation by performing vigorous arm exercises during frequent work breaks, and also by not smoking.
- Limit the hours of operation. Try to fill each day with jobs where operating the trimmer or other hand-held power equipment is not required.
- If you experience discomfort, redness and swelling of the fingers followed by whitening and loss of feeling, consult your physician before further exposing yourself to cold and vibration.

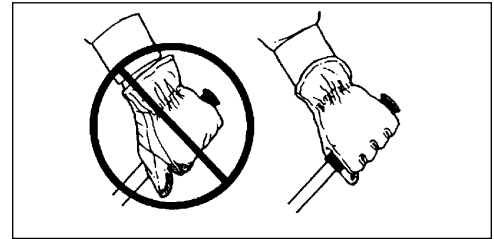


Repetitive Stress Injuries

It is believed that overusing the muscles and tendons of the fingers, hands, arms and shoulders may cause soreness, swelling, numbness, weakness, and extreme pain in those areas. Certain repetitive hand activities may put you at a high risk for developing a Repetitive Stress Injury (RSI). An extreme RSI condition is Carpal Tunnel Syndrome (CTS), which could occur when your wrist swells and squeezes a vital nerve that runs through the area. Some believe that prolonged exposure to vibration may contribute to CTS. CTS can cause severe pain for months or even years.

To reduce the risk of RSI/CTS, do the following:

- Avoid using your wrist in a bent, extended, or twisted position. Instead, try to maintain a straight wrist position. Also, when grasping, use your whole hand, not just the thumb and index finger.
- Take periodic breaks to minimize repetition and rest your hands.
- Reduce the speed and force with which you do the repetitive movement.
- Do exercises to strengthen the hand and arm muscles.
- Immediately stop using all power equipment and consult a doctor if you feel tingling, numbness, or pain in the fingers, hands, wrists, or arms. The sooner RSI/CTS is diagnosed, the more likely permanent nerve and muscle damage can be prevented.



DANGER

Do not operate this product indoors or in inadequately ventilated areas. Engine exhaust contains poisonous emissions and can cause serious injury or death.

Read the Manuals

- Provide all users of this equipment with the Operator's Manual and Safety Manual for instructions on Safe Operation.

Clear the Work Area

- Spectators and fellow workers must be warned, and children and animals prevented from coming nearer than 15 m (50 ft.) while the unit is in use.

Keep a Firm Grip

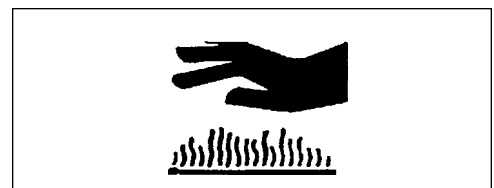
- Hold the front and rear handles with both hands, with thumbs and fingers tightly encircling the handles.

Keep a Solid Stance

- Maintain footing and balance at all times. Do not stand on slippery, uneven or unstable surfaces. Do not work in odd positions or on ladders. Do not over reach.

Avoid Hot Surfaces

- During operation, the drive shaft housing, attachment bearing housing and muffler cover area may become very hot, too hot to touch. Avoid contact during and immediately after operation.



EQUIPMENT

Before operation a complete check of the unit must be performed;

- Check unit for loose/missing nuts, bolts and screws. Tighten and/or replace as needed.
- Inspect shield for damage. Replace if shield is damaged or missing.
- Check that the cutting attachment is firmly attached and in safe operating condition.
- Check that front loop handle is adjusted for safe, comfortable operation. See Assembly Section for proper adjustment.



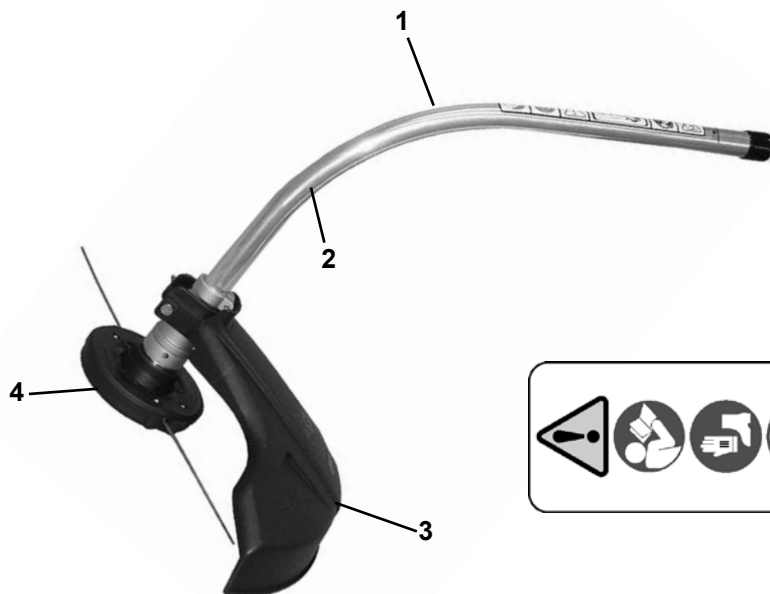
WARNING

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all openings.

- **ALWAYS** stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit.
- **DO NOT** start or operate unit unless all guards and protective covers are properly assembled to unit.
- **NEVER** reach into any opening while the engine is running. Moving parts may not be visible through openings.

DESCRIPTION

Locate this safety decal on your attachment. Make sure the decal is legible and that you understand and follow the instructions on it. If it cannot be read, a new one can be ordered from your ECHO dealer. See PARTS ORDERING instructions for specific information.



P/N X505005920



- # CONTENTS

- _____ - PAS Curved Shaft Trimmer Attachment
- _____ - Operator's Manual
- _____ - Safety Manual
- _____ - Warranty Card
- _____ - 12 pcs. 8 in. x .080 Pre-cut Nylon Line
- _____ - Shield Assembly
- _____ - Storage Hook



ASSEMBLY



WARNING

Do not perform maintenance or assembly procedures with engine running.

Parts Required: Plastic Shield Assembly

PLASTIC SHIELD INSTALLATION

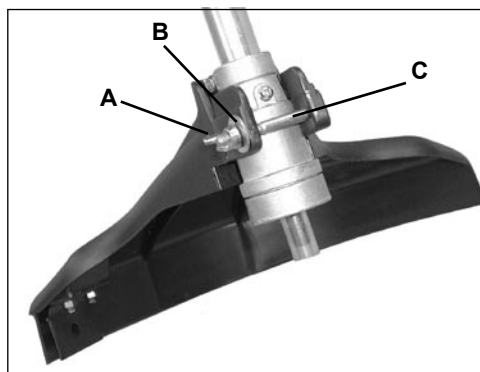


Caution

Wear Gloves or personal injury may result:

- Cutoff knife is sharp.
- Gearcase and surrounding area may be hot.

1. Remove wing nut (A), washer (B), and bolt (C).
2. Snap the shield over the bearing housing.
3. Install bolt (C), washer (B), and wing nut (A).



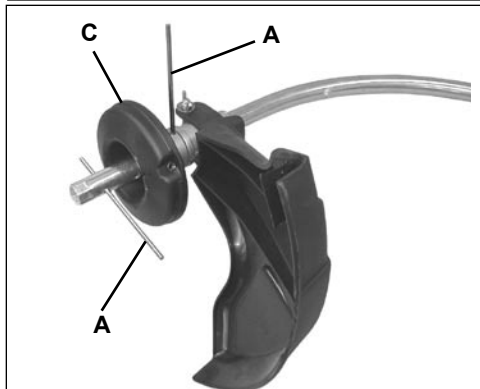
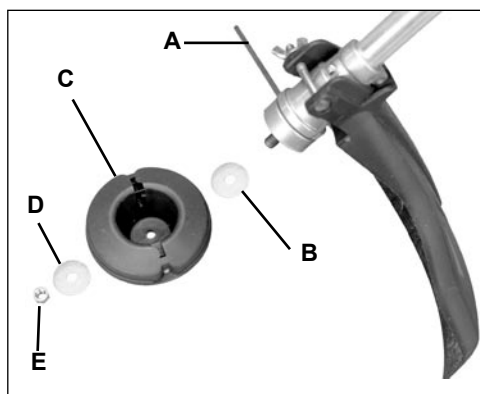
NYLON LINE HEAD INSTALLATION/REMOVAL

1. Align locating hole in upper plate with hole in bearing housing and insert 5 mm (3/16 in.) diameter locking tool (A).
2. Place large washer (B) then line head (C) on threaded shaft, followed by small metal washer (D) and locknut (E).
3. Install 3/8-24 locknut using 14.5 mm (9/16 in.) wrench. Turn locknut clockwise, and tighten securely.

IMPORTANT

Remember to remove the locking tool.

4. To remove line head, reverse assembly instructions.



POWER HEAD SHAFT/ATTACHMENT LOWER SHAFT ASSEMBLY

1. Set Power Head/Shaft Assembly on a level surface.
2. Pull locator pin (A) and rotate counter clockwise 1/4 turn to lock out position.
3. Remove vinyl cap from attachment drive shaft.
4. Remove cardboard spacer, if necessary.
5. Carefully fit attachment lower drive shaft assembly into coupler (B) to decal assembly line (C), making sure that the inner lower drive shaft engages into the upper drive shaft mount.

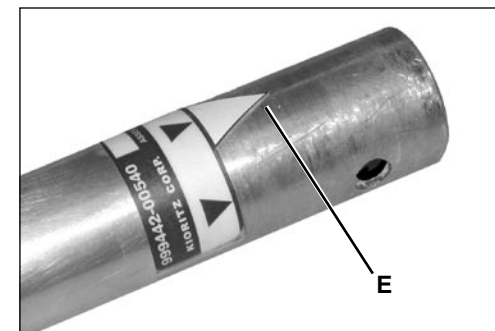
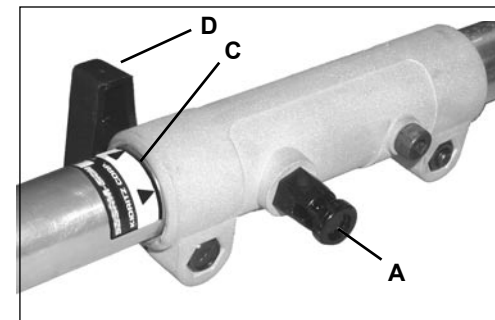
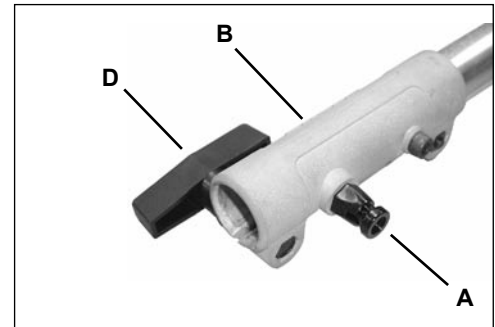
NOTE

Earlier model Power Heads may have shorter couplings. Short couplings fit flush to decal point (E). New couplings are 4-3/4 in. long, and fit flush to line (C).

NOTE

Lower bearing housing and head assembly must be in line with the engine.

6. Rotate locator pin (A) 1/4 turn clockwise to engage lower shaft hole. Insure locator pin is fully engaged by gently twisting lower drive shaft. Locator pin (A) should snap flush in coupler. Full engagement will prevent further shaft rotation.
7. Secure lower shaft assembly to coupler by tightening clamping knob (D).



OPERATION

NOTE

Refer to your Split Boom\Pro Attachment Series™ Operator's Manual for correct engine fueling, starting and stopping instructions.

IMPORTANT

Never wear line shorter than 1-1/2 inch extension from head, otherwise overspeeding and engine damage may result.

MAINTENANCE



WARNING

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all openings. Always stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit. Allow unit to cool before performing service. Wear gloves to protect hands from sharp edges and hot surfaces.

Your ECHO trimmer is designed to provide many hours of trouble free service. Regular scheduled maintenance will help your trimmer achieve that goal. If you are unsure or are not equipped with the necessary tools, you may want to take your unit to an ECHO Service Dealer for maintenance. To help you decide whether you want to DO-IT-YOURSELF or have the ECHO Dealer do it, each maintenance task has been graded. If the task is not listed see your ECHO dealer for repairs.

SKILL LEVELS

Level 1 = Easy to do. Common tools may be required.

Level 2 = Moderate difficulty. Some specialized tools may be required.

MAINTENANCE INTERVALS

Component	Maintenance Procedure	Skill Level	Interval
Drive Shaft	Grease	1	Every 25 hours of use
Screws/Nuts/Bolts	Inspect/Tighten/Replace	1	Before Each Use

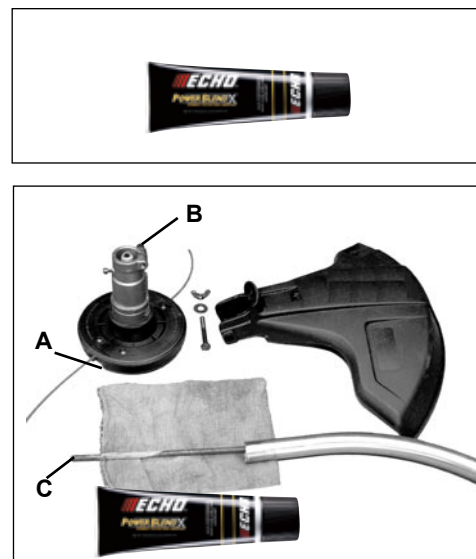
IMPORTANT - Time intervals shown are maximum. Actual use and your experience will determine the frequency of required maintenance.

LUBRICATION

Level 1.

Parts Required: POWER BLENDX™ 8 oz. (P/N 91014) or Lithium Base Grease.

1. Remove plastic shield.
2. Loosen bearing housing locating screw (A), at the top of the housing, loosen mounting screw (B) and remove gear case from drive housing.
3. Pull the flexible drive shaft (C) from the drive housing, wipe clean and recoat with a thin coating [1/2 oz. (15 ml)] of grease.
4. Slide the flexible drive shaft back in the drive housing being careful not to get dirt on the flexible drive shaft.
5. Install the bearing housing and shield.



NYLON LINE REPLACEMENT

Level 1.

Parts Required: Pre-cut Nylon Line

1. Shut engine off. Lay unit on the ground with head assembly up.
2. Remove old nylon line through center recess of head.
3. Insert pre-cut 204 mm (8 in.) length of nylon cutting line (recommended sizes 2.4 mm [.095 in.] to 3.9 mm [.155 in.]) through outside openings of trimmer head. Minimum of 153mm (6 in.) of line should extend from each opening. 3.9mm [.155 in.] line not recommended for trimmers under 26cc.

NOTE

Insert cutting line ends to center of head recess to insure easy removal of used lines.

NOTICE:

Nylon line can damage plastic shield. When installing line segments, make sure line does not curve upward toward shield.

MODELS	REQUIRED LINE SIZES
SRM-2100SB SRM-210SB/211SB PAS-210/211 PAS-225 PAS-230/231	.080 - .095 in.
SRM-2400SB	.095 - .130 in.
SRM-260SB/261SB PAS-2601 PAS-260/261 PAS-265	.095 - .155 in.



STORAGE

Storage Hook Installation

1. Insert small end of hook into locating hole on attachment shaft.
2. Slide plastic cap onto end of attachment shaft.



SPECIFICATIONS

Length -----	630 mm (24.8 in.)
Width -----	320 mm (12.6 in.)
Height -----	420 mm (16.53 in.)
Weight -----	1.09 kg. (2.4 lb.)
Drive Shaft-----	6.35 mm (1/4 in.) Flex Shaft
Rotating Direction -----	Clockwise viewed from the top
Cutter Head -----	Rapid Loader TM head (2-lines) with .080 Cross Fire TM Line
Cutting Swath -----	406 mm (16 in)

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SERVICING INFORMATION

PARTS/SERIAL NUMBER

Genuine ECHO Parts and ECHO REPOWER™ Parts and Assemblies for your ECHO products are available only from an Authorized ECHO Dealer. When you do need to buy parts **always** have the Model Number, Type and Serial Number of the unit with you. You can find these numbers on the engine housing. For future reference, write them in the space provided below.

Model No. _____ SN. _____

SERVICE

Service of this product during the warranty period must be performed by an Authorized ECHO Service Dealer. For the name and address of the Authorized ECHO Service Dealer nearest you, ask your retailer or call: 1-800-432-ECHO (3246). Dealer information is also available on our Web Site. When presenting your unit for Warranty service/repairs, proof of purchase is required.

ECHO CONSUMER PRODUCT SUPPORT

If you require assistance or have questions concerning the application, operation or maintenance of this product you may call the ECHO Consumer Product Support Department at 1-800-673-1558 from 8:30 am to 4:30 pm (Central Standard Time) Monday through Friday. Before calling, please know the model and serial number of your unit.

WARRANTY REGISTRATION

To ensure trouble free warranty coverage it is important that you register your ECHO equipment on-line at www.echo-usa.com or by filling out the warranty registration card supplied with your unit. Registering your product confirms your warranty coverage and provides a direct link between you and ECHO if we find it necessary to contact you.

ADDITIONAL OR REPLACEMENT MANUALS

Replacement Operator, Safety Manuals, and Parts Catalogs are available from your ECHO dealer or at www.echo-usa.com or by contacting ECHO Inc., 400 Oakwood Road, Lake Zurich, IL 60047 (800-673-1558). Always check the ECHO Web Site for updated information.

Safety Videos are available from your Echo dealer. A \$5.00 shipping charge will be required for each video.



DEALER?

Call
1-800-432-ECHO
or
www.echo-usa.com

CONSUMER PRODUCT SUPPORT

1-800-673-1558
8:30 - 4:30 Mon - Fri C.S.T.



ECHO®
ECHO, INCORPORATED
400 OAKWOOD ROAD
LAKE ZURICH, IL 60047
www.echo-usa.com

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